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ABSTRACT

Six college health textbooks published between 1980 and 1987 were analyzed to determine the extent of coverage of 10 selected content areas from "Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention." Content areas assessed included: motor vehicle accidents, alcohol and drug misuse, teenage pregnancy, sexually transmitted diseases, mental illness, suicide and homicide, smoking, nutrition, exercise and fitness, and stress. Data collection instruments were created for tabulation of textbook page space of four textbook characteristics: text, photographs, tables/charts/illustrations, and "other" characteristics. Readability level was determined using the SMOG formula. A mean of 40.34% of the total content space of the textbooks was devoted to the 10 selected content areas. Motor vehicle accidents, mental illness, and suicide and homicide were not addressed in every textbook. Alcohol and drug misuse accounted for the greatest amount of content space (10.47%). Text comprised the greatest amount of textbook characteristics space (47%). Mean SMOG readability levels of the textbooks ranged from 12.04 to 14.55. Two tables and 11 sets of graphs are provided. (Author/TJH)

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CONTENT ASSESSMENT OF SELECTED COLLEGE HEALTH TEXTBOOKS

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INDEX TERMS: Health Education, National Health Objectives, Textbooks

ABSTRACT

Six selected college health textbooks published between 1980 and 1987 were analyzed to determine the extent of coverage of 10 selected content areas from Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention. Content areas assessed were: 1) motor vehicle accidents, 2) alcohol and drug misuse, 3) teenage pregnancy, 4) sexually transmitted disease, 5) mental illness, 6) suicide and homicide, 7) smoking, 8) nutrition, 9) exercise and fitness, and 10) stress.

Data collection instruments were created for tabulation of textbook page space of four textbook characteristics: text, photographs, tables/charts/illustrations (T/C/I), and other. Readability level was determined using the SMOG formula.

A mean of 40.34% of the total content space of the textbooks was devoted to the 10 selected content areas. Motor vehicle accidents, mental illness, and suicide and homicide were not addressed in every textbook. Alcohol and drug misuse accounted for the greatest amount of content space (10.47%). Text comprised the greatest amount (47%) of the textbook characteristic space. Mean SMOG readability level of the textbooks ranged from 12.04 to 14.55.

INTRODUCTION

The 12 million students enrolled in colleges and universities in the United States represent about 5% of the population. College students are important to reach concerning issues of health and well-being because they:

> are a population in transition, many leaving home or a familiar environment for the first time....At a time when student lifestyle practices are open to examination, colleges and universities can have a significant and positive impact on students' decision making in regard to present and future health status. [1]

The publication of Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention [2] was the impetus for a decade-long plan to improve the health of Americans. The document, Promoting Health/Preventing Disease: Objectives for the Nation, [3] translated the broad goals of Healthy People into measurable objectives. The 226 objectives provided a framework on which groups and individuals could base their actions toward improved health.

The majority of college and university students belong to the group targeted as adolescents and young adults, ages 15 - 24, in the national health goals. Nearly half of the national objectives relate to personal lifestyle choices or informed community action in which education is the primary instrument for achievement. [4] Consequently, application of the health objectives through education for the college population is addressed.

American colleges and universities offer diversity in characteristics and a wide range of programs. Even though there is variety in programs, colleges and universities tend to have a core of courses, including a personal health class, for higher education grouped under the title of general studies or general education. The purpose of the study was to determine to what extent six selected college health textbooks published between 1980 and 1987 addressed selected content areas of Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention. Since many of the national goals and objectives can be addressed through education, it is important to look at materials used to teach about health. Textbook assessment of the consistency of college health textbooks with the national goals and objectives is important for the college population.

STUDY TEXTBOOKS

Six college health textbooks were selected from a composite list of 13 textbooks indicated by three representatives of publishing companies and were then considered to be a representative sample of the top selling college health textbooks published between 1980 and 1987. Availability of the textbooks was the final criterion for selection. Assessments made on the selected college health textbooks might be generalized to other college health textbooks because of the similarities in content and presentation. The textbooks used in this study appear in Table 1.

RESULTS

Textbook Characteristic Space Addressing HEALTHY PEOPLE

Four characteristics were identified in analyzing the textbooks: text, photographs, tables/charts/illustrations (T/C/I), and other (i.e., quizes, lists of terms, glossaries, self-directed activities). The amount of space covered by each textbook characteristics was assessed to determine what percent of the textbook characteristic space addressed 10 selected content areas of Healthy People. The 10 selected content areas were 1) motor vehicle accidents, 2) alcohol and drug misuse, 3) teenage pregnancy, 4) sexually transmitted disease, 5) mental illness, 6) suicide and homicide, 7) smoking, 8) nutrition, 9) exercise and fitness, and 10) stress.

The smallest percent of textbook characteristic space addressing the 10 selected content areas was 31%. Textbook D had just 31% of its text space and textbook F had 31% of its photograph space. The largest percent of textbook characteristic space addressing the selected content areas was 57%. Textbook F had 57% of its text space and textbook B had 57% of its T/C/I space.

Textbook C had a balanced representation between the four textbook characteristics in the percent of textbook characteristic space of the selected content areas. Textbook C ranged from 35% of T/C/I to 40% of other, resulting in the smallest range (6) between the four textbook characteristics. The greatest range (27) in percent of textbook characteristic space was noted in textbook F. See Figure 1.

Textbook Characteristics by Content Area

From the textbook content space addressing the selected content areas, distributions of the four textbook characteristics were expressed as the percent of the content area space. Six of the 10 content areas were addressed by all four textbook characteristics in every college health textbook. Those six content areas were (a) alcohol and drug misuse, (b) teenage pregnancy, (c) smoking, (d) nutrition, (e) exercise and fitness, and (f) stress. Table 2 lists the inclusion of content areas for each textbook.

For alcohol and drug misuse, four out of the six college health textbooks (A, C, D, F) had over 50% of text. See Figure 2.

For teenage pregnancy, four out of the six college health textbooks (A, C, D, E) had patterns of textbook characteristics distributed similarly to the total textbook: greatest percent of space covered by text, followed by other, T/C/I, and then photographs. However, the other two textbooks (B, F) had very small percents of other (13%, 10%). See Figure 3.

For the content area, smoking, four textbooks (A, B, D, E) had distributions of textbook characteristics similar to the total textbook: text had the largest amount of space, followed by other, T/C/I, and then photographs. The remaining two textbooks (C, F) had extra large text percents (53%, 60%) and very small amounts of T/C/I (5%, 7%). See Figure 4.

Textbook characteristics for nutrition showed a decrease in the percent of text and an increase in the other three

characteristics (other, T/C/I, photographs). Two textbooks (A, C) had very large percents of other (40%, 46%) and two textbooks (B, D) had large percents of T/C/I (35%, 39%). See Figure 5.

For exercise and fitness, in four of the six textbooks (A, B, C, E), the textbook characteristic other was noted in greater amounts than usual, ranging from 30% to 40%. See Figure 6.

For the content area, stress, text generally dominated the textbooks (ranging from 45% to 56%). The combination of photographs and T/C/I percentages was very small (11% to 22% of the total). See Figure 7.

The four content areas lacking in coverage by all four textbook characteristics were: (a) motor vehicle accidents, (b) mental illness, (c) suicide and homicide, and (d) STDs. The content area, motor vehicle accidents, was addressed by a combination of text and T/C/I in two textbooks (D, E), a combination of text and other in one textbook (A), just T/C/I in two textbooks (B, C) and not addressed in any form in one textbook (F). See Figure 8.

Mental illness was addressed in greatest percentage by text ranging from 56% to 67%. Mental illness was addressed by all four textbook characteristics in textbook E, addressed by a combination of three textbook characteristics in three textbooks (A, C, D) and not addressed in two textbooks (B, F). See Figure 9.

The content area, suicide and homicide, was represented differently in every textbook. Three textbook characteristics (text, photographs, and other) were used to present information

on suicide and homicide in one textbook (D), and a combination of two textbook characteristics (text and other, and text and photographs) was used in two textbooks (A, F). Representation by just one textbook characteristic (other or T/C/I) was evident in two textbooks (C, E). One textbook (B) did not have any information on suicide and homicide. See Figure 10.

For STDs, two of the textbooks (E, F) did not have any T/C/I, but had very large percents of other (63%, 43%). All six textbooks had very small percentages of photographs (4%-8%) on STDs. See Figure 11.

Textbook Readability Levels

The SMOG readability formula was applied to every chapter of the six college health textbooks. The lowest readability level determined was grade 11 on seven chapters in textbook A, and two chapters in textbook C. The highest readability level was grade 16 found in one chapter in textbooks C and D and three chapters in textbook F. The mean readability levels of the textbooks ranged from 12.04 to 14.55. Textbook C had the greatest range (6) in the variability of its readability level.

Further analysis of the six college health textbooks was done by comparing the textbook characteristic results with the readability level results. Textbook F, with the highest mean readability level, 14.55, had the greatest percentage of text (56%), the greatest combined percentage of photographs and T/C/I (27%), but the smallest percent of other (18%). Textbook F also had the smallest amount of textbook content space (421.57 pages). Textbooks A and C, having the lowest readability levels

(12.04 and 13.27), had the greatest percent of other (34% each), and the smallest combined percent of photographs and T/C/I (22% and 17%).

RECOMMENDATIONS

This study of college health textbooks provides depictions of the occurrence of text characteristics and the amount of textbook space of selected content areas. It is recommended that health educators use some or all of these analyses to assist in the evaluation of health textbooks for use in college courses. Attention to the second decade goals established in the year 2000 objectives will be important to future educational programs and materials, including textbooks. It is important for health professionals in college and university settings to be active in the process of goal-setting for improved health. [5] Awareness and application of the year 2000 objectives by health educators and emphasis on the congruity of health education materials and textbooks with national health priorities will be critical for addressing the priority health issues for the college population in future programming.

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5. Guyton R, Corbin S, Zimmer C, et al. College students and national health objectives for the year 2000: A summary report, J Am Coll Health 1989;38(1):9-14.

TABLE 1

STUDY SAMPLE OF SIX COLLEGE HEALTH TEXTBOOKS

A	Hales, D. R., & Williams, B. K. (1986). An Invitation to Health, (3rd ed.). Menlo Park, CA: Benjamin/ Cummings.
B	Mullen, K. D., Gold, R. S., Belcastro, P. A., & McDermott, R. J. (1986). Connections for Health. Dubuque, IA: Wm C. Brown.
C	Insel, P. M., & Roth, W. T. (1982). Core Concepts in Health, (3rd ed.). Palo Alto, CA: Mayfield.
D	Dintiman, G. B., & Greenberg, J. S. (1983). Health Through Discovery, (2nd ed.). Reading, MA: Addison- Wesley.
E	Levy, M. R., Dignan, M., & Shirreffs, J. H. (1984). Life and Health, (4th ed.). New York, NY: Random House.
F	Payne, W. A., & Hahn, D. B. (1986). Understanding Your Health, St. Louis, MO: Times Mirror/Mosby.

TABLE 2

INCLUSION OF THE SELECTED CONTENT AREAS:
PERCENT OF TEXTBOOK CONTENT SPACE IN
SIX SELECTED COLLEGE HEALTH TEXTBOOKS

	Textbooks					
Content Area	A	B	C	D	E	F
Motor Vehicle Accidents	.35	.05	.05	.5	.42	0
Alcohol/Drug Misuse	9.42	13.52	7.62	8.9	13.81	9.56
Teenage Pregnancy	7.27	5.33	6.11	2 25	5.77	5.38
STD's	2.78	6.85	4	2.27	1.99	2.28
Mental Illness	1.64	0	.83	.43	1.99	0
Suicide/Homicide	.56	0	.14	.62	.25	.29
Smoking	4.25	4.69	4.61	3.64	4.2	5.4
Nutrition	4.98	7.22	4.7	5.89	5.39	5.63
Exercise/Fitness	5.33	5.26	4.16	4.34	4.26	4.82
Stress	4.08	5.3	6.4	4.18	4.57	4.63

FIGURE 1

Textbook Characteristic Space Addressing HEALTHY PEOPLE:

Percent of Textbook Characteristic Space

in Selected College Health Textbooks

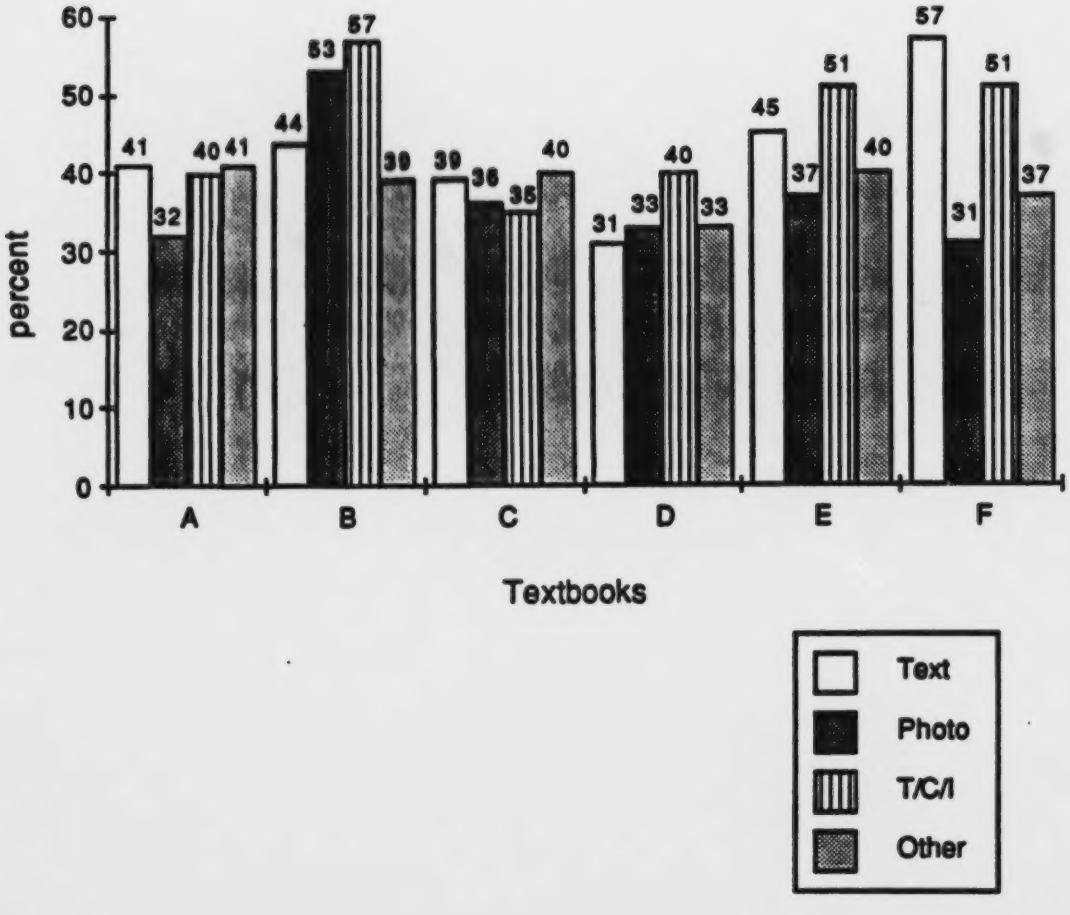

FIGURE 2

Textbook Characteristics by Content Area: Division of Text, Photographs, T/C/I, and Other Comprising the Textbook Content Space on Alcohol and Drug Misuse

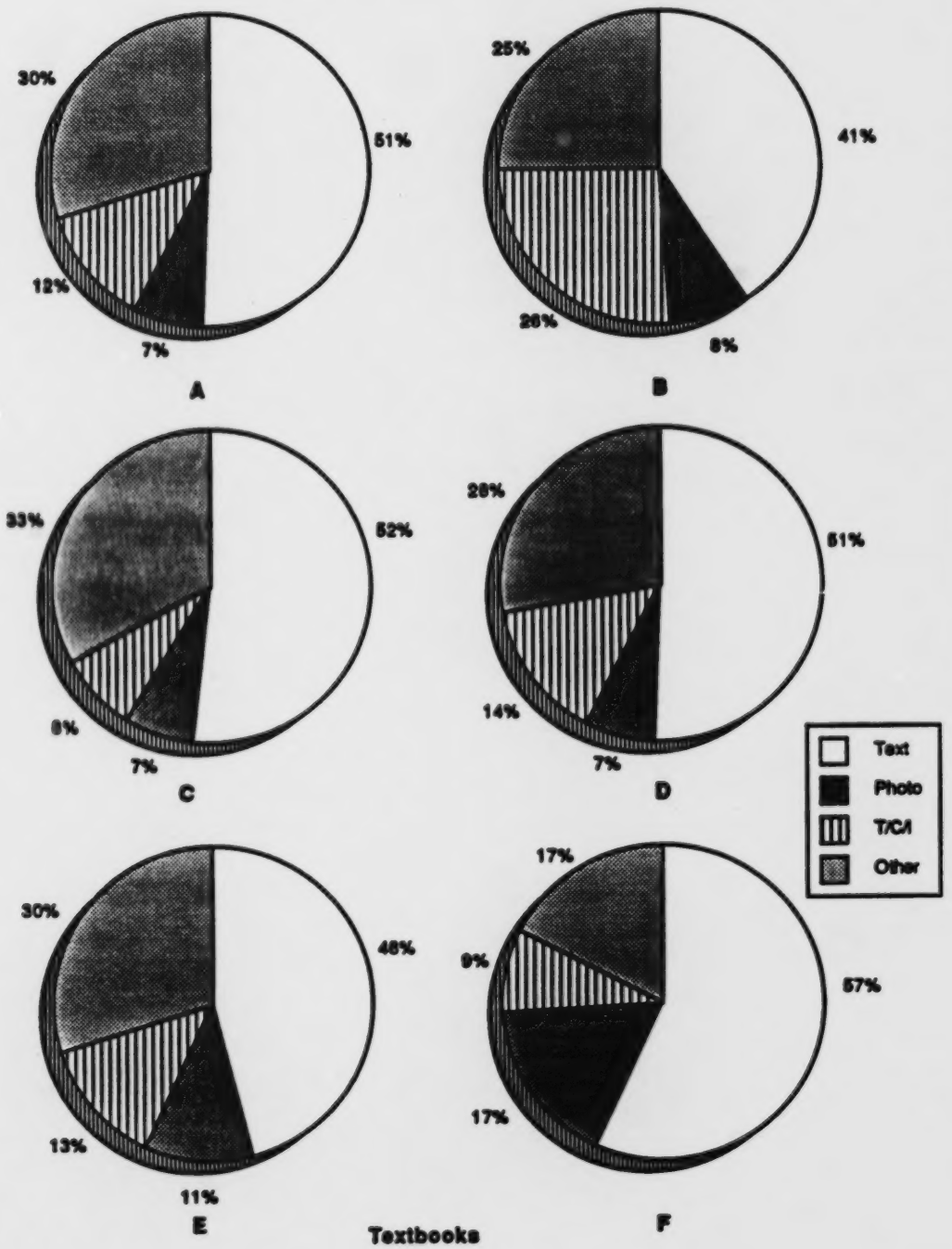

FIGURE 3

Textbook Characteristics by Content Area: Division of Text, Photographs, T/C/I, and Other Comprising the Textbook Content Space on Teenage Pregnancy

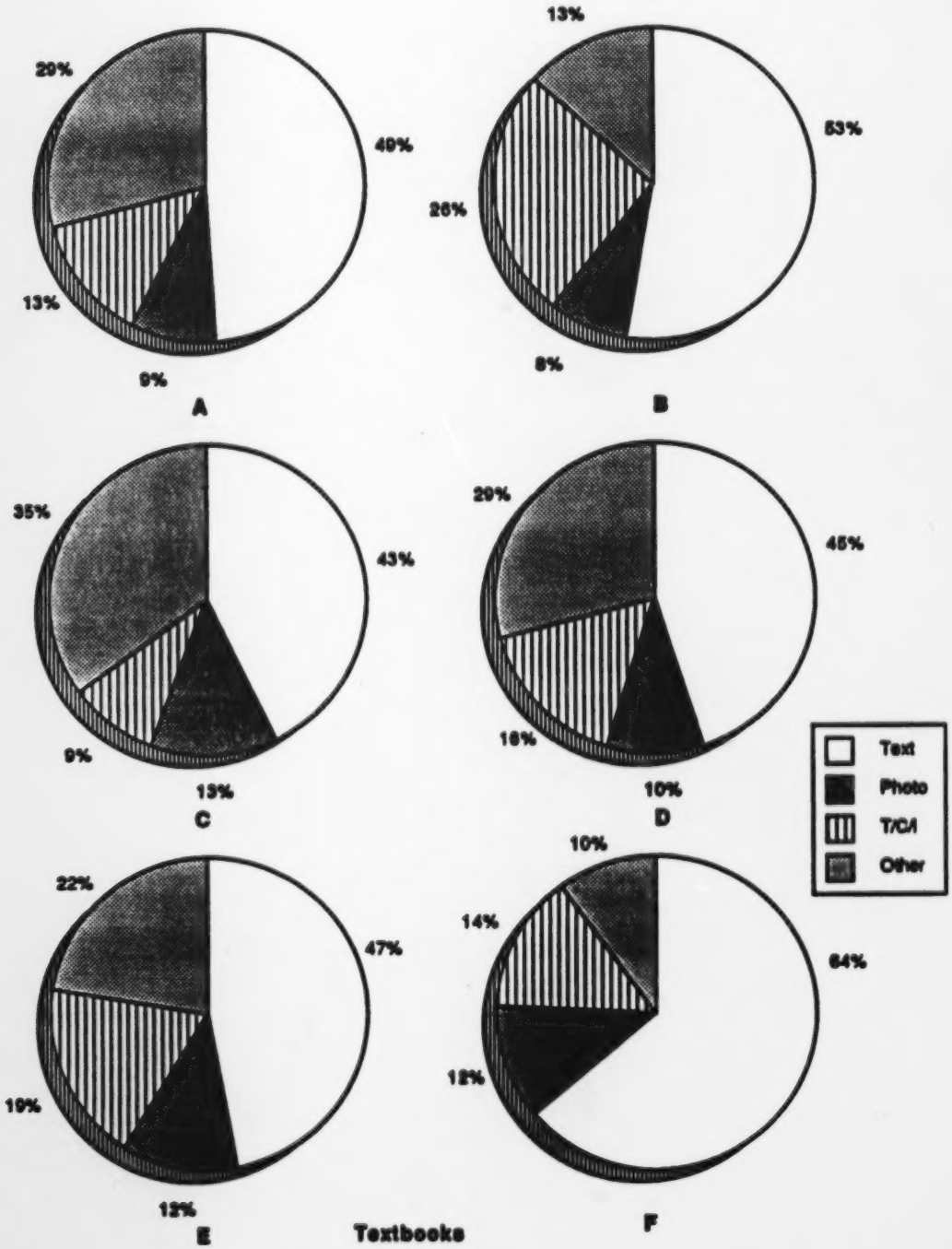

FIGURE 4

Textbook Characteristics by Content Area: Division of Text, Photographs, T/C/I, and Other Comprising the Textbook Content Space on Smoking

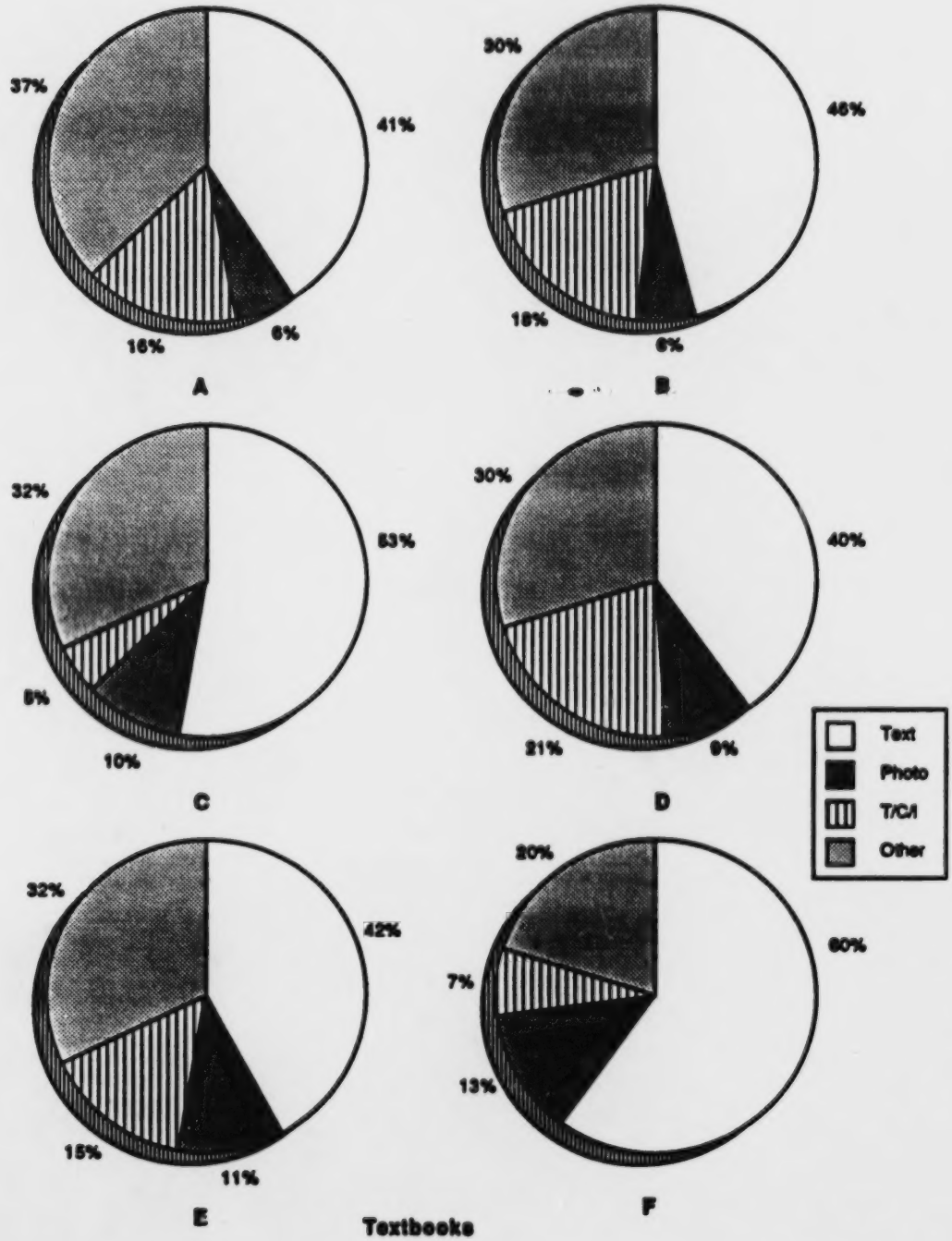

FIGURE 5

Textbook Characteristics by Content Area: Division of Text, Photographs, T/C/I, and Other Comprising the Textbook Content Space on Nutrition

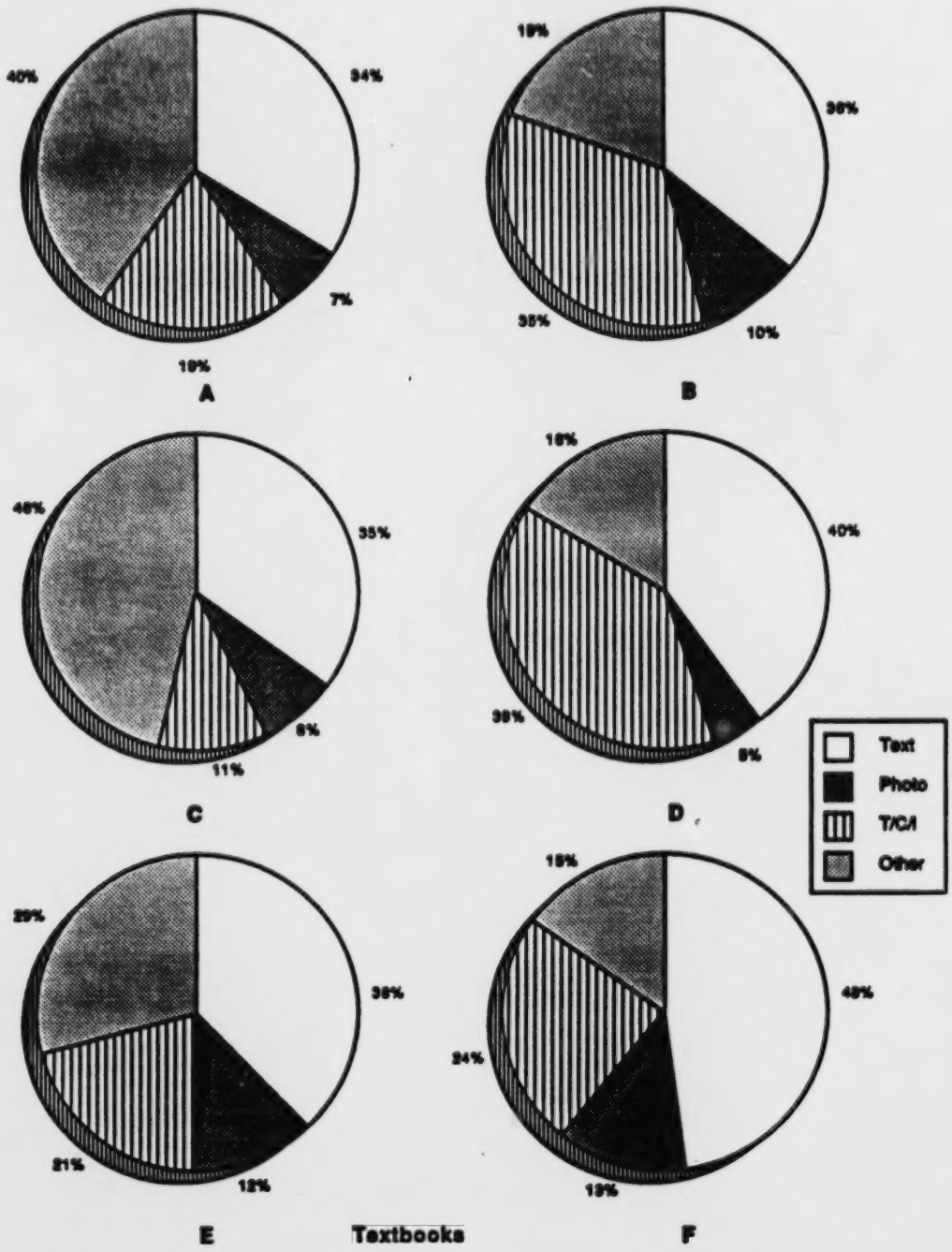

FIGURE 6

Textbook Characteristics by Content Area: Division of Text, Photographs, T/C/I, and Other Comprising the Textbook Content Space on Exercise and Fitness

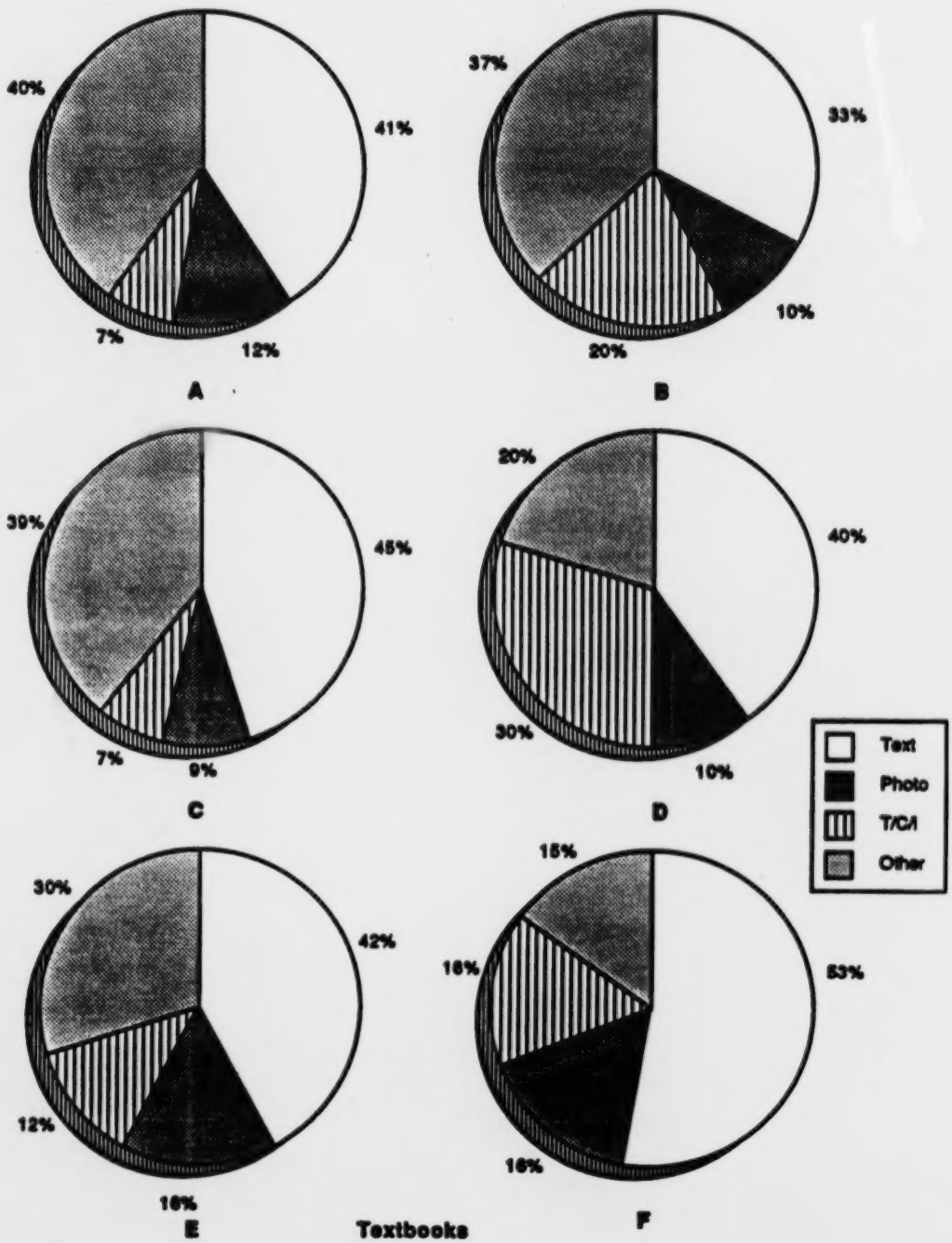

FIGURE 7

Textbook Characteristics by Content Area: Division of Text, Photographs, T/C/I, and Other Comprising the Textbook Content Space on Stress

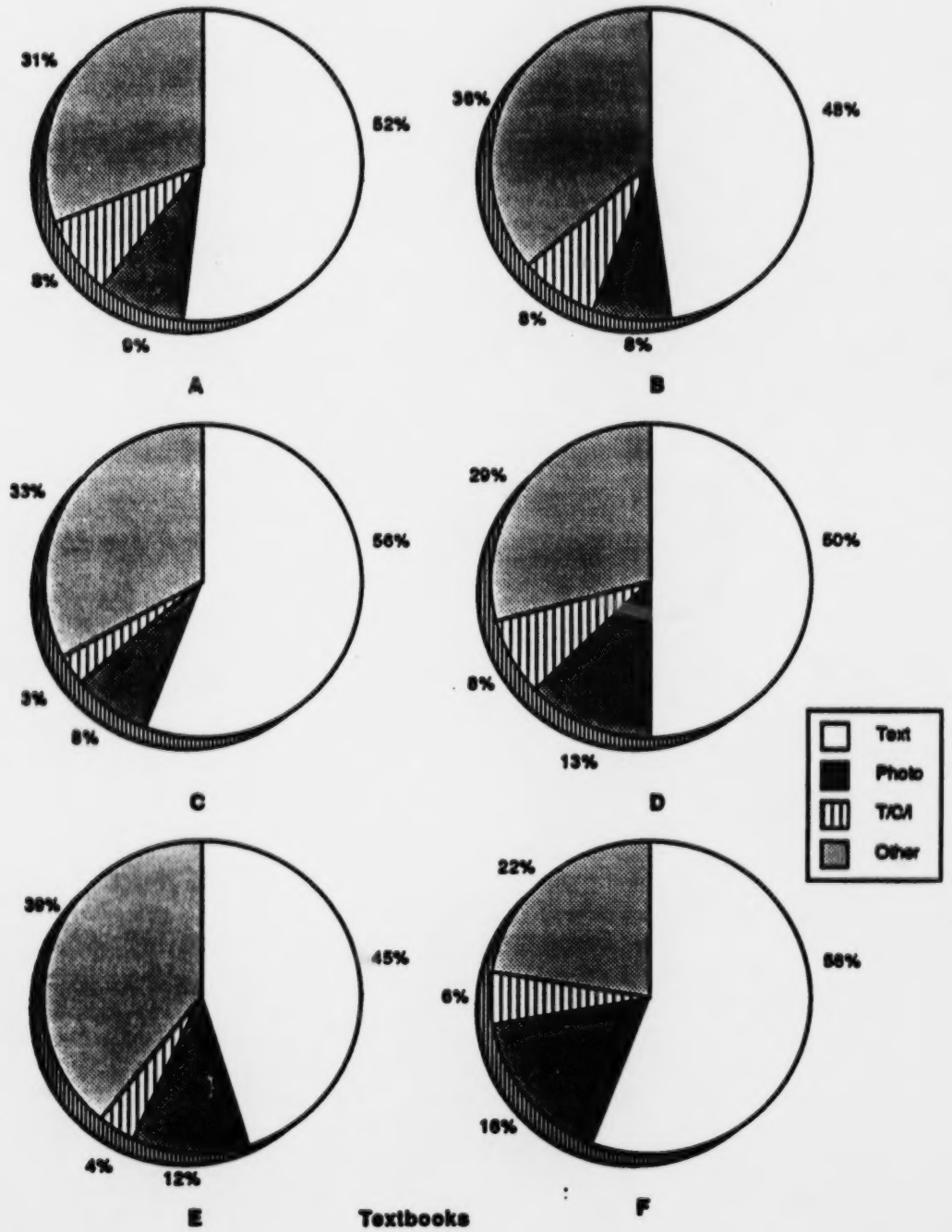

FIGURE 8

Textbook Characteristics by Content Area:
Division of Text, Photographs, T/C/I, and Other
Comprising the Textbook Content Space on
Motor Vehicle Accidents

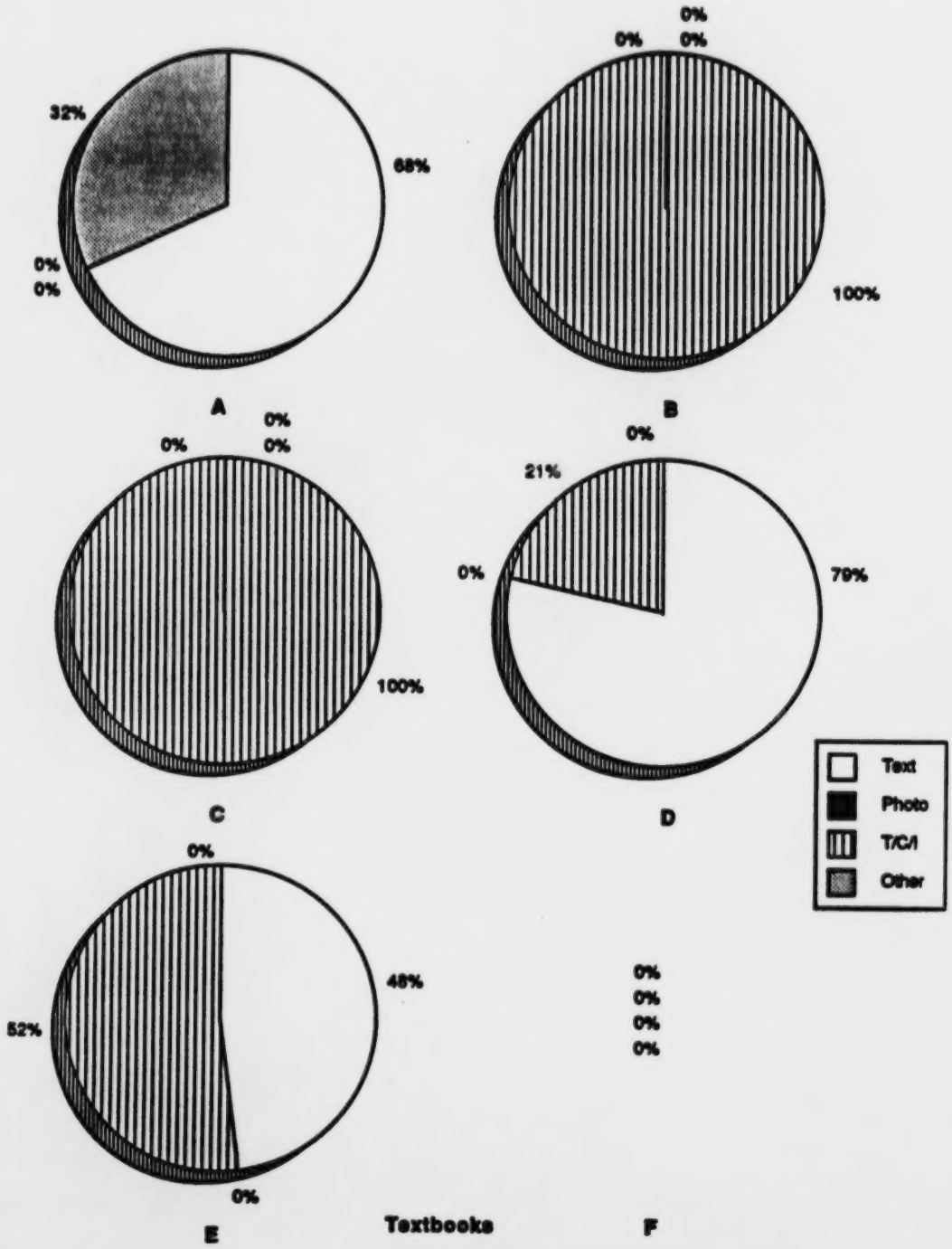

FIGURE 9

Textbook Characteristics by Content Area:
Division of Text, Photographs, T/C/I, and Other
Comprising the Textbook Content Space on
Mental Illness

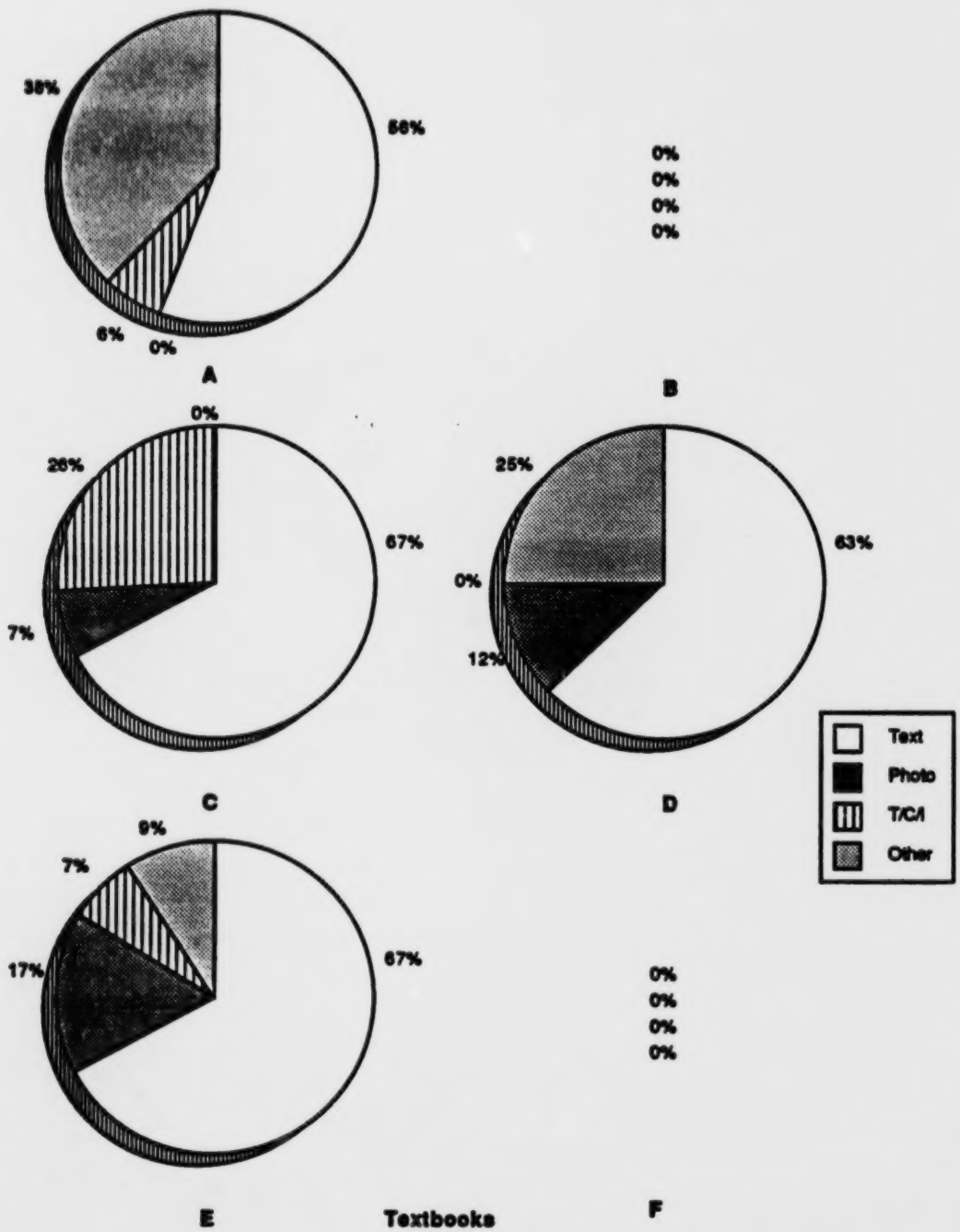

FIGURE 10

Textbook Characteristics by Content Area: Division of Text, Photographs, T/C/I, and Other Comprising the Textbook Content Space on Suicide and Homicide

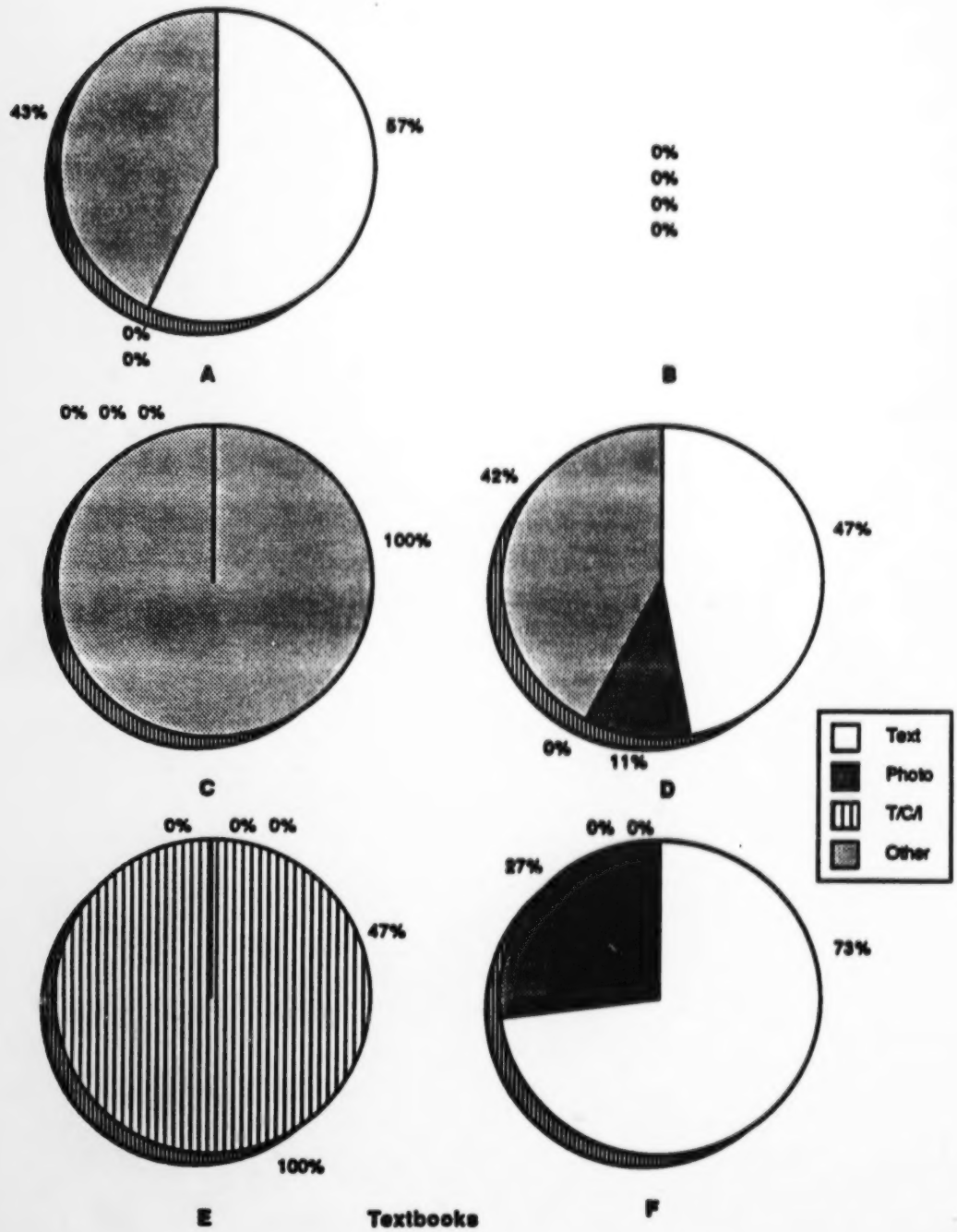

FIGURE 11

Textbook Characteristics by Content Area: Division of Text, Photographs, T/C/I, and Other Comprising the Textbook Content Space on STDs